

What is claimed is:

1 1. A method for producing an on-chip signal transforming device, the method comprising:
2 providing a substrate;
3 laying a first conductive layer above the substrate, wherein the first conductive layer has
4 a plurality of interleaved inductors; and
5 laying a second conductive layer above the substrate and insulated from the first
6 conductive layer, wherein the second conductive layer has at least one inductor.

1 2. The method of claim 1, wherein the second conductive layer is below the first conductive
2 layer.

1 3. The method of claim 1, wherein the at least one inductor is a plurality of interleaved
2 inductors.

1 4. The method of claim 1, wherein the at least one inductor is a spiral inductor.

1 5. The method of claim 1, further comprising laying a third conductive layer insulated from
2 the first and second conductive layers and wherein the at least one inductor is partly in the third
3 conductive layer and the first conductive layer is in between the second conductive layer and the
4 third conductive layer.

1 6. A method for producing an on-chip signal transforming device, the method comprising:
2 providing a substrate;
3 laying a first conductive layer above the substrate, wherein the first conductive layer has
4 a plurality of interleaved inductors; and

5 laying a second conductive layer above the substrate insulated from the first conductive
6 layer, wherein the second conductive layer has a plurality of interleaved inductors.

1 7. A method for producing an on-chip signal transforming device, the method comprising:
2 providing a substrate;

3 laying a first conductive layer above the substrate, wherein the first conductive layer has
4 a plurality of interleaved inductors; and

5 laying a second conductive layer above the substrate insulated from the first conductive
6 layer, wherein the second conductive layer has a first part of an inductor;

7 laying a third conductive layer insulated from the first and second conductive layers; and

8 wherein the inductor has a second part in the third conductive layer, the first part and the
9 second part are connected by way of a via and the first conductive layer is in between the second
10 conductive layer and the third conductive layer.

1 8. An on-chip signal transforming device, the device comprising:

2 a substrate;

3 a first conductive layer above the substrate, wherein the first conductive layer has a
4 plurality of interleaved inductors; and

5 a second conductive layer above the substrate insulated from the first conductive layer,
6 wherein the second conductive layer has at least one inductor.

1 9. The device of claim 8, wherein the second conductive layer is below the first conductive
2 layer.

1 10. The device of claim 8, wherein the at least one inductor is a plurality of interleaved
2 inductors.

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- 1 11. The device of claim 8, wherein the at least one inductor is a spiral inductor.
- 1 12. The device of claim 8, further comprising:
2 a third conductive layer insulated from the first and second conductive layers; and
3 wherein the at least one inductor is also partly in the third conductive layer and the first
4 conductive layer is in between the second conductive layer and the third conductive layer.
- 1 13. An on-chip signal transforming device, the device comprising:
2 a substrate;
3 a first conductive layer above the substrate, wherein the first conductive layer has a
4 plurality of interleaved inductors; and
5 a second conductive layer above the substrate insulated from the first conductive layer,
6 wherein the second conductive layer has a plurality of interleaved inductors.
- 1 14. An on-chip signal transforming device, the device comprising:
2 a substrate;
3 a first conductive layer above the substrate, wherein the first conductive layer has a
4 plurality of interleaved inductors; and
5 a second conductive layer above the substrate insulated from the first conductive layer,
6 wherein the second conductive layer has at least one inductor;
7 a third conductive layer in the insulator layer insulated from the first and second
8 conductive layers; and
9 wherein the at least one inductor is also partly in the third conductive layer and the first
10 conductive layer is in between the second conductive layer and the third conductive layer
- 1 15. A method for producing an on-chip signal transforming device, the method comprising:
2 providing a substrate;

3 laying a first conductive layer above the substrate, wherein the first conductive layer has
4 a first spiral inductor; and

5 laying a second conductive layer above the substrate insulated from the first conductive
6 layer, wherein the second conductive layer has at least a second spiral inductor, such that the
7 first and second spiral inductors are interleaved.

1 16. The method according to claim 15 further including the step of:

2 laying a third spiral inductor on a third conductive layer above the substrate and
3 insulated from the first and second conductive layers, wherein the third conductive layer has at
4 least a third spiral inductor that couples to the first spiral inductor and the second spiral inductor.

1 17. A method for producing an on-chip signal transforming device, the method comprising:
2 providing a substrate;

3 laying a first conductive layer above the substrate, wherein the first conductive layer has
4 a first spiral inductor and a second spiral inductor that are interleaved; and

5 laying a second conductive layer above the substrate insulated from the first conductive
6 layer;

7 providing a conductive path from the first conductive layer to the second conductive
8 layer and back to the first conductive layer to allow the first spiral inductor to cross over the
9 second spiral inductor.

1 18. The method according to claim 17 further including the step of:

2 laying a third spiral inductor on a third conductive layer above the substrate and
3 insulated from the first and second conductive layers, wherein the third conductive layer has at
4 least a third spiral inductor that couples to the first spiral inductor and the second spiral inductor.